Indian Institute of Information Technology, Design and Manufacturing Kancheepuram

Chennai

Placement Brochure

2018-2019

From the Director's Desk

The ultimate objective of an institute is to offer quality education and it depends on the quality of culture in an institution. Presently, quality education stands at the crossroads of keeping pace with the emerging needs of mankind alongside rapid change of governance, environment and scientific discovery. The research and project-led education at IIITDM Kancheepuram has been the right destination for quality students and faculty over the years.

IIITDM, an Institute of National Importance and higher learning has shown consistent growth since its inception in the year 2007. It has world class smart classrooms, lab and hostel facilities. It is a unique institute that integrates Engineering, Design and Manufacturing with Information Technology. In our established Technology Incubation Cell, we encourage faculty, students and industries to build start-ups.

The institute being surrounded by reputed industries makes it an amicable place for teaching and learning with good industry-institute interaction. Being mentored by IIT Madras in the beginning days was a great help to the institute in having quality faculty, who are the main driving force for its growth. The competitive curriculum and offered programs are liked by students and industries, which has been reflected through high level placements and higher studies abroad and in India at institutes of repute.

IIITDM has been the meeting point of ideas and the best academic practices which is at par with other reputed institutions. IIITDM has been a preferred destination of students and faculty, where we are committed to provide opportunities for everyone to achieve their potential. We expect to achieve new heights in future years with continued support from its stakeholders.

- **Prof. Banshidhar Majhi**
  Director

About

Industry 4.0 is transforming the paradigms of design, business, management and engineering education across the globe. As the epoch of invention and engineering science wanes, innovation and engineering design that are set to take center stage, demand from the 21st century engineer, a holistic and composite know-how of design, business and management in addition to technical acumen. The Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, established by the Government of India to pioneer this constitutional transition, focuses on educating the bright young minds of the country in design-oriented engineering.

An Institute of National Importance, it is one of the first in India to integrate design, business, humanities, and management courses in its dynamic undergraduate engineering curriculum. Our students, chosen through nationwide competitive testing, are uniquely skilled owing to 3-semester-long product design projects and uncompromising practical sessions in our state-of-the-art labs. Home to astute and experienced faculty, the flourishing interdisciplinary design and research projects are a testimony to the liberal and conducive academic atmosphere of the institution.

IIITDM produces skilled, ambitious and conscionable graduates who confront challenges and initiate change in the industry to propel India's dream of being a prominent, purposeful player on the global grounds of the fourth industrial revolution.

Vision

To become a premier institute of excellence in design and manufacturing that would create and develop a new generation of engineers and technologists with the ability and mindset to lead Indian industries in global competitive economic environment.

Mission

To be a world class apex centre of excellence in education, research, development and training in design and manufacturing.

Admin block

Design

Create

Innovate

Contents

Admission Procedure

B.Tech - 4YEARS Dual Degree - 5YEARS	All India Rank based on JEE Main through JOSAA. SAT score for Non Resident Indians through DASA.
M.Tech- 2YEARS	GATE (CCMT)
Ph.D	Institute Entrance Exam and Interview

The Under Graduate and Dual Degree(DD) admissions are strictly based on the merit of performance in JEE Main or SAT (for NRIs). The high standard exams and break-neck competition ensure that the students possess good intellectual calibre, scientific temper, and the determination to progress.

JEE and SAT, being nationwide and international examinations respectively, brings a rich and diverse populace of different cultures, ideas and exposures from not just across the country but also around the world which allows to have a truly global experience.

Admission to M.Des program on various disciplines are on the basis of GATE score through CCMT.

Ph.D students are admitted based on performance and interview .

Academic Programs

The Institute follows continuous evaluation methodology in all courses with the adoption of “interactive learning approach”. In addition to regular paper-based examinations, projects and discussions also form a part of the continuous evaluation.

B.TECH - 4YEARS
- Computer Engineering
- Electronics and Communication Engineering
  (Spl : Design and Manufacturing)
- Mechanical Engineering
  (Spl : Design and Manufacturing)
- Smart Manufacturing

M.DES - 2YEARS
- Mechanical Systems Design
- Electronics Systems Design
- Communications Systems Design
- Smart Manufacturing

DUAL DEGREE - 5YEARS
- B.Tech - Computer Engineering +
  M.Tech - Computer Engineering
- B.Tech - Electronics and Communication Engineering (D&M) +
  M.Tech - VLSI and Electronic Systems Design
- B.Tech - Electronics and Communication Engineering (D&M) +
  M.Tech - Signal Processing and Communication Systems Design
- B.Tech - Mechanical Engineering (D&M) +
  M.Tech - Product Design
- B.Tech - Mechanical Engineering (D&M) +
  M.Tech - Advanced Manufacturing

PhD
ECE, CSE, ME, Mathematics and Physics

Faculty

"Teachers have three loves: love of learning, love of learners, and the love of bringing the first two loves together." Scott Hayden

IIITDM is home to versatile and committed faculty who hold conviction in its vision of engendering a new lineage of innovative problem-solvers capable of correlating industrial requirement with technological know-how, by imparting a knowledge of IT-enabled design and manufacturing, to the upcoming generations of engineers. Qualified by doctorate degrees from premier institutions and tempered by research, industrial and teaching experience, they implement IIITDM's dynamic curriculum through a harmonious blend of conceptual learning and practical application. State-of-the-art laboratory courses conceived to facilitate interactive, collaborative learning and habituate students to the rigors of the work world, are a specialty of the institution. Actively engaged in multidisciplinary projects of academic and commercial relevance, our professors instill by example, that, an appreciation of the synergy of various disciplines is vital for systemic success. At IIITDM, they strive to create a conducive academic atmosphere that is liberal yet inspiring, free-spirited yet disciplined, in which the journey of discovery is limited only by one's thirst for knowledge.

Computer Science and Engineering

Prof Banshidhar Majhi (PhD - NIT Rourkela)
Image Processing, Data Compression, Cryptography and Security, Parallel Computing

Dr. Masilamani V (Ph.D - IIT Madras)
Image Processing and Computer Vision, Pattern Recognition, Algorithms and Data Structure

Dr. Noor Mahammad Sk (Ph.D - IIT Madras)
High Performance VLSI Architectures, Packet Processing Architectures and Algorithms

Dr. Sadagopan N (Ph.D - IIT Madras)
Graph Theory and Combinatorics, Data Structures and Algorithms, Computer Networks

Dr. T.S. Narayanan (Hari) (PhD - Concordia Univ.)
Database Engg, Networking, Software Engg Information Security

Dr. Sivaselvan B (Ph.D - NIT Trichy)
Knowledge and Data Engineering, Data Structures in Computer Science

Dr. Munesh Singh (Ph.D - NIT Rourkela)
WSNs, IOT, Ad-Hoc Network, Robotics, Connected Cars, Cloud Computing

Dr. Jagadeesh Kakarla (Ph.D - NIT Rourkela)
Wireless Sensor Networks, Adhoc Networks, Wireless Sensor & Actor Networks

Dr. Umarani Jayaraman (Ph.D - IIT Kanpur)
Biometrics, Pattern Recognition

Dr. Vasumathi K Narayanan (PhD - Concordia Univ.)
Computational modeling and Formal verification of Distributed/concurrent systems

Electronics and Communication Engineering

Dr. Binsu J Kailath (Ph.D - IIT Madras)
VLSI Design, MOS Device Modeling and Technology, MEMS

Dr. Damodharan P (Ph.D - IIT Madras)
Power Electronics and Drives, Brushless DC and AC Drives

Dr. Shunmugham R Pandian (Ph.D - IIT Delhi)
Autonomous Underwater Robots, Electromechanical Systems, Intelligent Control

Dr. Premkumar K (Ph.D - IISc Bangalore)
Scheduling in Networks, Social Networks, Cognitive Radio, IoT, Big Data Analytics

Dr. Priyanka Kokil (Ph.D - NIT Allahabad)
Nonlinear system, Delayed system, Multidimensional system

Dr. Selvajyothi K (Ph.D - IIT Madras)
Power Electronics , Drives and Control, FPGA/DSP Hardware, Instrumentation

Dr. M D Selvaraj (Ph.D - IIT Delhi)
Wireless Communications, Cooperative Diversity, Green Communications

Dr. Asutosh Kar (Ph.D - BIT Mesra)
Advanced Signal Processing, Adaptive Filter Theory, Hearing-Aids, Acoustic Noise Analysis

Dr. B Chitti Babu (Ph.D - NIT Rourkela)
Power Electronics Systems, Controls and Grid Integration

Dr. Prerna Saxena (Ph.D - VNIT Nagpur)
Antenna design, Metamaterials, Smart Antennas, Antenna Array Pattern Synthesis, Soft Computing Techniques in Electromagnetics

Dr. Vijayakumar K (Ph.D - NIT Trichy)
Industrial Electronics, Smartgrid, Renewable Energy

Dr. K P Pradhan (Ph.D - NIT Rourkela)
Nanoelectronic Devices, SOI MOSFETs, FinFETs, NC-FETs, Device Modeling and Simulation

Mechanical Engineering

Dr. Senthilkumaran K (Ph.D - IIT Delhi)
Additive Manufacturing, Sustainable Manufacturing, Smart Manufacturing

Dr. Jayabal K (Ph.D - IIT Madras)
Computational Mechanics, Finite Element Methods, Material Modelling

Dr. Jayavel S (Ph.D - IIT Madras)
Computational Fluid Dynamics, Fluid and Thermal Sciences, Heat Transfer

Dr. Karthic Narayanan R (Ph.D - NTU Singapore)
Manufacturing Process, Mechanical behavior of Nano Materials, Solar PV stress analysis

Dr. S Gowthaman (PhD - N.Carolina A&T State Univ)
Polymer composites, Nanomaterials Experimental Mechanics

Dr. Siva Prasad AVS (Ph.D - IIT Kanpur)
Damage Mechanics, Dynamic Behaviour of Materials, Meshless Methods

Prof. S. Narayanan (Ph.D - IIT Kanpur)
Vibration and Acoustics, Smart Structures, Vibration and Noise Control

Dr. Pandithevan P (Ph.D - IIT Guwahati)
Bio-mimetic Design Tissue Engineering, Medical Image-Based Reconstruaion, Layered Manufacturing

Dr. Raja B (PhD – CEG, Anna Univ, Chennai)
Enhanced heat transfer, Electronic cooling systems, Food Processing Techniques and Design

Dr. Shahul Hamid Khan (Ph.D - NIT Trichy)
Environmentally Conscious Manufacturing, Logistics and Distribution Management, PLM

Dr. Sreekumar M (Ph.D - IIT Madras)
Robotics, Cornpliant Mechanisms, Smart Materials and Smart Structures, Fuzzy Control

Dr. Sudhir Varadarajan (Ph.D - IIT Madras)
Design Thinking, Design Management, Complex Responsive Processess in Design and Innovation

Dr. Venkata Timmaraju Mallina (Ph.D - IITM)
Mathematical Modeling of Materials Behavior, Fatigue and Fracture of Engineering materials, Design with Polymer Composites

Prof. Venkateshan SP (Ph.D - IISc)
Space Heat Transfer, Inverse Methods in Heat Transfer, Cooling of Electronic Components

Dr. Shubhankar Chakraborty (Ph.D - IIT KGP)
Heat Transfer, Multiphase Flow, Multisensor Measurement and Data Fusion, Image Processing

Physics

Dr. Naveen Kumar (Ph.D - IIT Delhi)
Fiber Optics, , Solar Thermal Energy Applications, Renewable energy applications

Dr. Tapas Sil (Ph.D - VisvaBharati Univ)
Giant Resonances of Nuclei, Relativistic Mean Field Theory in Nuclear Structure

Dr. Anushree P Khandale (Ph.D - Nagpur University)
Solid oxide Fuel Cell, Alkaline Fuel cell, Electrode Materials, Electrochemical Impedance Spectroscopy

Dr. Vivek Kumar (Ph.D - IIT Delhi)
Photovoltaics, Semiconductor Nanostructures, Raman and Photoluminescence Spectroscopy

Dr. Jayachandra Bingi (Ph.D - IIT Madras)
Photonics for Defence and Medical Applications (Photonic devices and sensors), Bio-inspired Research and Development

Mathematics

Dr. Shalu M A (Ph.D - IIT Madras)
Graph Theory, Algorithms, Metabolic Networks

Dr. Nachiketa Mishra (Ph.D - IIT Madras)
Numerical Analysis, Homogenization Theory

Dr. Nil Kamal Hazra (Ph.D - IISER Kolkata)
Reliability Theory

Dr. Vijayakumar S (Ph.D - IIT Madras)
Algorithms, Combinatorial Optimization, Computational Complexity

Design Centric Curriculum

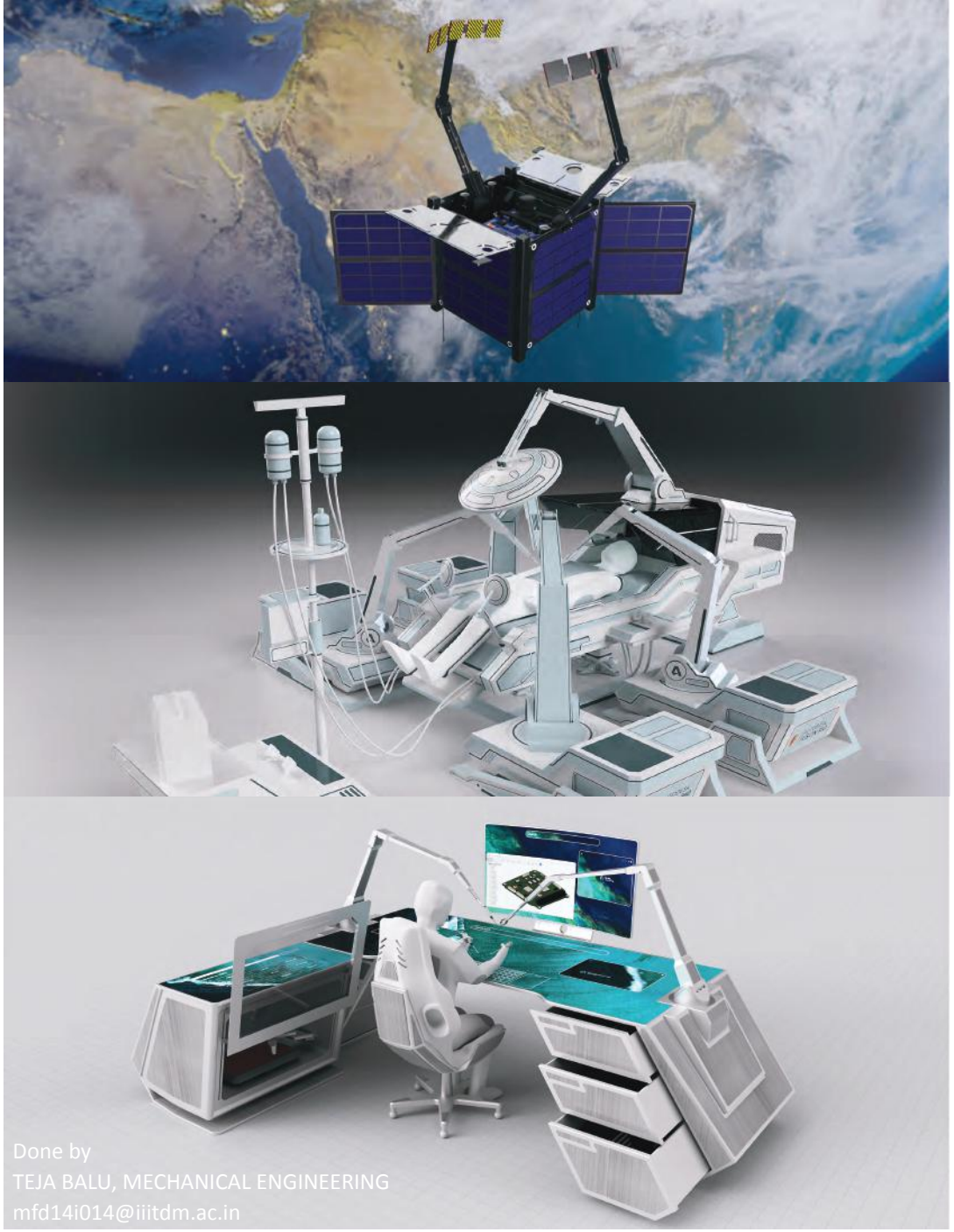
The current industrial scene not only demands technical proficiency, but necessary skills in continually identifying needs, generating potent ideas, conceptualizing and prototyping, and converting them to viable products.

With the current industrial standards and consumer awareness, it is necessary to design products that are easy to manufacture, efficient and also become part of users themselves.

To facilitate such requirements, design has been one of the cornerstones of the institute, in line with its vision of ‘Design, Create and Innovate’.

The students have at their disposal a variety of design based engineering courses that helps bridge the gap between industry and academia and provides opportunities for increased collaboration.

The plethora of interdisciplinary courses promote flow of thought across different streams, assisting students in acquiring holistic knowledge and thereby encouraging them to become successful entrepreneurs.



Done by
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Curriculum

COMPUTER ENGINEERING

Languages
- C
- C++
- Assembly
- Verilog HDL
- API Socket Programming
- Open MP
- Perl
- Python

Program offered focuses on enabling the students with skills to seamlessly integrate both the software and hardware aspects of computing, enabling them to be ready for the industry's requirements.

- Alongside core courses such as Data Structures and Algorithms, Operating Systems, Automation and Compiler Design and so on, there is an extensive focus on the hardware aspects through courses on Computer Organization and Design, Computer Architecture, and VLSI System Design.

- The hardware angle is further reinforced through rigorous laboratories on Computer Organization and Design, Computer Networking, Embedded Systems and VLSI Design. The software angle is simultaneously enhanced through practice courses on Database Systems and Object Oriented Algorithm Design.

- The Design and Manufacturing curricula enable them to explore and build solutions to real-world problems, with sensitivity to the interdisciplinary requirements for computing solutions in different industry domains.

ELECTRONICS AND COMMUNICATION ENGINEERING

Program offered focuses on developing expertise not just in hardware but also on the core software that goes hand-in-hand with it. This ensures that students passing out are ready for the interdisciplinary nature of work in the industry.

- The Design and Manufacturing curricula enables them to explore developing solutions to real-world problems, as full working products. They are further tempered to take into account the practical concerns of manufacturability, reliability and cost factors.

- Courses on Computational Engineering, Data Structures and Algorithms, Micro Processors and Computer Architecture enable them to have a useful intersection with Computer Engineering.

- As part of rigorous laboratory programs, students are exposed to dealing with Simulation Software such as MATLAB, SIMULINK, MULTISIM, Xilinx ISE design suite, Cadence and LabView to name a few; followed by Hardware such as Tiva LaunchPad, ZedBoards, NVS Boards, Microprocessor kits and many more in order to build hands-on experience.

MECHANICAL ENGINEERING

Program offered focuses on enabling the students with skills to seamlessly integrate both the mechanics, electronics and computing aspects of Engineering, preparing them for the needs of today's technology-driven industries.

- Alongside core engineering courses on Thermal Engineering, Fluid Dynamics, Machine Design and Industrial Engineering, students go through courses on Computational Engineering, Electrical Drives, Sensors and Control Systems, and Micro-processors. This equips them to contribute to the interdisciplinary nature of today's industries.

- A strong emphasis is laid on computer-aided simulation and analysis, owing to the changing trends in the industry. Students are equipped with performing CAD modeling, simulations, finite element modeling and computational fluid dynamics and data analysis. They work on a range of software environments: CATIA V5 and V6, Autodesk Inventor and Fusion 360, ANSYS, MATLAB and R Programming.

- The Design and Manufacturing curricula enable them to explore and build solutions to real-world problems, with sensitivity to the interdisciplinary requirements, owing to their exposure to the electronics and computational methods.

BACHELOR OF TECHNOLOGY

Common Courses to All B.Tech Programme

Mathematics
Calculus
Differential Equations
Linear Algebra
Probability Theory

Basic Science and Engineering
Engineering Mechanics
Computational Engineering
Basic Electrical & Electronics Engineering
Engineering Electromagnetics
Science and Engineering of Materials

Design and Innovation Concepts
Concepts in Engineering Design
Design History
Earth, Environment & Design
Systems Thinking for Design
Designing Intelligent Systems
Sociology of Design
Sustainable Design
Innovation Management
Entrepreneurship and Management Functions
Design for Quality and reliability
Product Management
Product Design Practice

Common Laboratory Courses
Computational Engineering
Materials & Mechanics
Computational Engineering
Measurement & Data Analysis
Engineering Electromagnetics
Design Realization
Engineering Graphics
Industrial Design Sketching
Engineering Skills

Management and Others
Entrepreneurship and Management Functions
Engineering Economics
Professional Ethics for Engineers
English for Communication

Computer Engineering COE

Core

Discrete Structures for Computing
Digital and Analog Circuits Design
Signals, Systems, and Communication
Programming and Data Structures
Design and Analysis of Algorithms
Database Systems
Operating Systems
Computer Organization and Design
Computer Networking
VLSI System Design
Automata and Compiler Design
Computer Architecture
Embedded Systems
Human Computer Interaction
Electives (Core and Free)
Internship
Design Project
Final Year Project

Laboratories
Data Structures - using C-programming
Digital and Analog Circuits Design
Object Oriented Algorithm Design and Analysis
Database Systems
Computer Organization and Design
Operating Systems
Computer Networking
VLSI System Design
Computer Architecture
Embedded Systems

Electronics and Communication Engineering (Design & Manufacturing) EDM

Core

Digital Logic Design
Signals and Systems
Analog Circuits
Control Systems
Digital Signal Processing
Power Electronics
Micro Processors and Computer Architecture
Information Theory and Coding
Analog and Digital Communication
VLSI Design
Data Communication Networks
Mechanical Design of Electronic Systems
Embedded System Design
Electives (Core and Free)
Internship
Design Project
Final Year Project

Laboratories
Data Structures - using C-programming
Digital and Analog Circuits Design
Object Oriented Algorithm Design and Analysis
Database Systems
Computer Organization and Design
Operating Systems
Computer Networking
VLSI System Design
Computer Architecture
Embedded Systems

Mechanical Engineering (Design & Manufacturing) MDM

Core

Thermal Engg - Concepts and Applications
Mechanics of Materials
Basic Concepts in Manufacturing Processes
Electrical Drives
Numerical Methods
Fluid Mechanics and Heat Transfer
Kinematics and Dynamics of Mechanisms
Quality Inspn and Product Validation
Thermal Energy Systems
Design of Machine Elements
Automation in Manufacturing
Sensors and Controls
Computational Methods in Engineering
CAD and Manufacturing
Electives (Core and Free)
Internship
Design Project
Final Year Project

Laboratories
Machine Drawing and Manufacturability Analysis
Mechanical Design Practice
Product Realization Practice
Quality Inspection and Product Validation
Fluid Mechanics and Heat Transfer
Thermal Engineering
Sensors and Controls
Manufacturing Automation
Microprocessors and Controllers
Mechanical Design Simulation

DUAL DEGREE

Common Courses to All B.Tech Programme

Mathematics
Calculus
Differential Equations
Linear Algebra
Probability Theory

Basic Science and Engineering
Engineering Mechanics
Computational Engineering
Basic Electrical & Electronics Engineering
Engineering Electromagnetics
Science and Engineering of Materials

Design and Innovation Concepts
Concepts in Engineering Design
Design History
Earth, Environment & Design
Systems Thinking for Design
Designing Intelligent Systems
Sociology of Design
Sustainable Design
Innovation Management
Entrepreneurship and Management Functions
Design for Quality and reliability
Product Management
Product Design Practice

Common Laboratory Courses
Computational Engineering
Materials & Mechanics
Computational Engineering
Measurement & Data Analysis
Engineering Electromagnetics
Design Realization
Engineering Graphics
Industrial Design Sketching
Engineering Skills

Management and Others
Entrepreneurship and Management Functions
Engineering Economics
Professional Ethics for Engineers
English for Communication

B.Tech Computer Engineering + M.Tech Computer Engineering
CED

Core
Discrete Structures for Computing
Digital and Analog Circuits Design
Signals, Systems, and Communication
Programming and Data Structures
Design and Analysis of Algorithms
Database Systems
Operating Systems
Computer Organization and Design
Computer Networking
VLSI System Design
Automata and Compiler Design
Computer Architecture
Embedded Systems
Human Computer Interaction
High Performance Computing
Interactive Computer Graphics
Device Drivers
Analytics & Systems of Big Data
Electives (Core and Free)
Internship
Design Project
Final Year Project

Laboratories
Data Structures using C-Programming
Digital and Analog Circuits Design
Object Oriented Algorithm Design and Analysis
Database Systems
Computer Organization and Design
Operating Systems
Computer Networking
VLSI System Design
Computer Architecture
Embedded Systems
High Performance Computing
Interactive Computer Graphics
Device Drivers
Analytics & Systems of Big Data

B. Tech ECE (D&M) + M.Tech VLSI & Electronics Systems Design
EVD

Core
Digital Logic Design
Signals and Systems
Analog Circuits
Control Systems
Digital Signal Processing
Power Electronics
Micro Processors and Computer Architecture
Information Theory and Coding
Analog and Digital Communication
VLSI Design
Data Communication Networks
Mechanical Design of Electronic Systems
Embedded System Design
Digital IC Design
Electromagnetic Interference and Compatibility
Analog IC Design
Digital System Testing and Testable Design
VLSI System Design
Digital Systems Engineering
Data Analytics
Electives (Core and Free)
Internship
Design Project
Final Year Project

Laboratories
Analog Circuits
Digital Logic Design
Data Structures and Algorithms
Electrical Drives
Digital Signal Processing
Sensing and Instrumentation
Microprocessors and Micro Controllers
Analog and Digital Communication
Electronic Manufacturing and Prototyping
VLSI Design
Electromagnetic Interference and Compatibility
System on Programmable Chip
Analog and Digital IC Design
Digital System Testing and Testable Design
Embedded System Design
VLSI System Design

B. Tech ECE (D&M) + M.Tech Signal Processing & Communications Systems Design
ESD

Core
Digital Logic Design
Signals and Systems
Analog Circuits
Control Systems
Digital Signal Processing
Power Electronics
Micro Processors and Computer Architecture
Information Theory and Coding
Analog and Digital Communication
VLSI Design
Data Communication Networks
Mechanical Design of Electronic Systems
Embedded System Design
Advanced Digital Signal Processing
Data Communication Networks
Data Analytics
Advanced Digital Communications and Coding
RF and Microwave Circuit Design
Detection and Estimation Theory
Wireless Communication
Electives (Core and Free)
Internship
Design Project
Final Year Project

Laboratories
Analog Circuits
Digital Logic Design
Data Structures and Algorithms
Electrical Drives
Digital Signal Processing
Sensing and Instrumentation
Microprocessors and Micro Controllers
Analog and Digital Communication
Electronic Manufacturing and Prototyping
VLSI Design
Advanced Digital Signal Processing
Advanced Digital Communications and Coding
RF and Microwave Circuit Design
Wireless Communication
DSP System Design

DUAL DEGREE

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Common Courses to All B.Tech Programme

Mathematics
Calculus
Differential Equations
Linear Algebra
Probability Theory

Basic Science and Engineering
Engineering Mechanics
Computational Engineering
Basic Electrical & Electronics Engineering
Engineering Electromagnetics
Science and Engineering of Materials

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Design for Quality and reliability
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Product Design Practice

Common Laboratory Courses
Computational Engineering
Materials & Mechanics
Computational Engineering
Measurement & Data Analysis
Engineering Electromagnetics
Design Realization
Engineering Graphics
Industrial Design Sketching
Engineering Skills

Management and Others
Entrepreneurship and Management Functions
Engineering Economics
Professional Ethics for Engineers
English for Communication

B.Tech Mechanical Engineering + M.Tech Product Design

MPD

Core
Thermal Engineering - Concepts and Applications
Mechanics of Materials
Basic Concepts in Manufacturing Processes
Electrical Drives
Numerical Methods
Fluid Mechanics and Heat Transfer
Kinematics and Dynamics of Mechanisms
Quality Inspection and Product Validation
Thermal Energy Systems
Design of Machine elements
Automation in Manufacturing
Sensors and Controls
Computational Methods in Engineering
Computer Aided Design and Manufacturing
Data Analytics
Design with Advanced Engineering Materials
Design for Manufacture and Assembly
Probabilistic Engineering Design
Ergonomics
Design Optimization
Electives (Core and Free)
Internship
Design Project
Final Year Project

Laboratories
Machine Drawing and Manufacturability Analysis
Mechanical Design
Product Realization
Quality Inspection and Product Validation
Fluid Mechanics and Heat Transfer
Thermal Engineering
Sensors and Controls
Manufacturing Automation
Microprocessors and Controllers
Mechanical Design Simulation
Reverse Engineering and product Design
Product Life-cycle Management
Mechanical Design Simulation
Innovation Studio

B.Tech Mechanical Engineering + M. Tech Advanced Manufacturing

MFD

Core
Thermal Engineering - Concepts and Applications
Mechanics of Materials
Basic Concepts in Manufacturing Processes
Electrical Drives
Numerical Methods
Fluid Mechanics and Heat Transfer
Kinematics and Dynamics of Mechanisms
Quality Inspection and Product Validation
Thermal Energy Systems
Design of Machine elements
Automation in Manufacturing
Sensors and Controls
Computational Methods in Engineering
Computer Aided Design and Manufacturing
CNC Technology and Programming
Computer Aided Design and Manufacturing
Data Analytics
Advanced Machining Processes
Additive Manufacturing
Manufacturing Systems
Surface Modification Technologies
Processing of Polymers and Composites
Advanced Manufacturing Processes Practice
Product Life Cycle Management
Electives (Core and Free)
Internship
Design Project
Final Year Project

Laboratories
Machine Drawing and Manufacturability Analysis
Mechanical Design
Product Realization
Quality Inspection and Product Validation
Fluid Mechanics and Heat Transfer
Thermal Engineering
Sensors and Controls
Manufacturing Automation
Microprocessors and Controllers
Mechanical Design Simulation
Computer Numerical Control
Design of Experiments

MASTER OF DESIGN

Communication Systems Design
CDS

Courses
Concepts of Product Design and Development
Advanced Digital Communications and Coding
Multiuser Information Theory
RF System Design
Quality and Reliability Based Design
Advanced Communication Networks
Electives (Four)
Major Project – Part 1
Major Project – Part 2

Mechanical System Design
MDS

Courses
Concepts of Product Design and Development
Design and Analysis of Mechanisms
Design with Advanced Engineering Materials
Design for Manufacture and Assembly
Advanced Mechanics of Materials
Quality and Reliability Based Design
Electives (Four)
Major Project – Part 1
Major Project – Part 2

Electronics Systems Design
CDS

Courses
Concepts of Product Design and Development
Analog IC Design
Electromagnetic Interference and Compatibility
Embedded Systems Design
Quality and Reliability Based Design
Digital IC Design
Electives (Four)
Major Project – Part 1
Major Project – Part 2

Smart Manufacturing
SMT

Courses
IoT and Cloud Computing
Machine to Machine Communication
Mechatronics Systems Design
Analytics and Systems of Big Data
Information systems in Manufacturing
Major Project – Part 1
Major Project – Part 2

Elective Courses for B.Tech / Dual Degree / M.Des / Ph.D

Additive Manufacturing
Advanced Data Structures & Algorithms
Advanced Geometric Modeling & CAD
Aesthetics in Design
Antenna Theory & Design
Automobile Engineering and Systems
Communication Systems
Computational Fluid Dynamics
Computer Aided Process Planning
Computer and Networks Security
Data Mining
Design for Manufacture and Assembly
Design for Vibration Control
Design of Electronic Cooling System and Packaging
Design of Heat Exchangers
Design of Switched Mode Power Supplies
Digital Control System
Digital Image Processing
Digital System Testing and Testable Design
Discrete Data Systems
Electromagnetic Interference and Compatibility
Fiber Optics in Communication
Game Theory
Graph Theory
Green Energy and Product Design
Information Retrieval Systems
Logistics and Distribution Management
Mass Transfer in Industrial Applications
Mechatronic Systems Design
Micro Electro-Mechanical Systems
Microwave Integrated Circuits
Mobile Robotics
MOS Modeling for VLSI Circuits
Network Algorithmics
Network System Design
Nuclear Physics
Operations and Supply Chain Management
Optical Fiber Communication
Optimization Techniques
Optoelectronics Devices
Principles of Economics
Probabilistic Engineering Design
Quantum Mechanics
Randomized and Approximation Algorithms
Sensors and Measurements
Smart Materials and Applications
Solid State Devices
Statistical Mechanics
Sustainable Manufacturing
Topics in Stochastic Processes
Transforms and their applications
VLSI Data Conversion Circuits
VLSI Technology
Wireless Communications

Product Design and Prototyping

Apart from final year projects, the students at both UG and PG level explore conceptual design and product development through self developed workable models. The design usually begins with a survey and followed by a visual prototype. Upon technical analyses and review comments of the expert committee, a green signal given to exhibit the proof of concept. The products are interdisciplinary and thus the teams are also inter-department. The students are free to use additive prototyping or traditional model making of material of suitable choice. This approach helps the students to understand the importance of interdisciplinary nature of present and futuristic product design. The students practice customer interview and House of quality in the Need stage; creative techniques such as Morphological charts, TRIZ, Bio-mimicry etc in the conceptualization phase; solid modeling softwares and analysis package in the analysis phase ; and finally use 3D printing, prototype making in the product realization phase. A systematic approach of product design makes the students to bring aspects of engineering and technical features, commercial importance, safety features, eco-friendliness, ergonomics, aesthetics etc into the real time and need of the hour product.

Honors Program

The honors program is a privilege offered by the institute to the B.Tech and Dual Degree students having high academic calibre. Those having CGPA greater than 9.0 at the end of 2nd year can register for Honors program and can take up to 4 additional courses. Those who are opting for Honors program have to earn 9 additional credits. Depending upon the level of rigorous and duration a course can be taken for 2-4 credits. It can be chosen from in-house electives as well from edX, Coursera, etc.

Online Electives

The institute promotes self-learning as a way of nurturing young brains and in today's world of internet, this can happen through online courses. Students are allowed to earn a total of 6 credits from online courses taken as electives or additional courses required for honors program. The availability of a gamut of courses on various websites like coursera and edx provides students the opportunity to pursue their unique talents and interests. Also the inclusion of online courses would break the limitations of the resources available in the institute and would open greater frontiers for the students to explore.

Internships

Students take up summer internships in the starting of their final year which is part of the curriculum to gain first-hand experience of the professional world. Internships serve as the perfect platform for students to sneak a preview into the working of professional life while allowing recruiters to evaluate a student's long-term potential by monitoring their performance in real-world tasks.

Students gain exposure to real-world problems and issues that perhaps are not found in textbooks and cultivate adaptability and creativity in a dynamic world. The internship gives the student an easy transition from being a student to entering the workforce. It also increases opportunities within a company for faster advancement and growth. These internships last up to 6 months starting from May and extending till mid of October.

International Relations

In today's globalised world, the importance of international relations is profound, especially in the field of education. The scale of educational exchange across borders is widening day by day. IIITDM Kancheepuram encourages interactive educational exchange programs with many established and reputed institutions to provide a globalised and informative environment to its students. In light of these interactions, this institute maintains active collaborations with the Nagaoka University of Technology Japan, through summer internships, scholarship programs and invited talks by various research scholars and professors.

UNIVERSITÀ degli STUDI di CATANIA

UNIVERSITÀ DEGLI STUDI DI GENOVA

国立大学法人 長岡技術科学大学 Nagaoka University of Technology

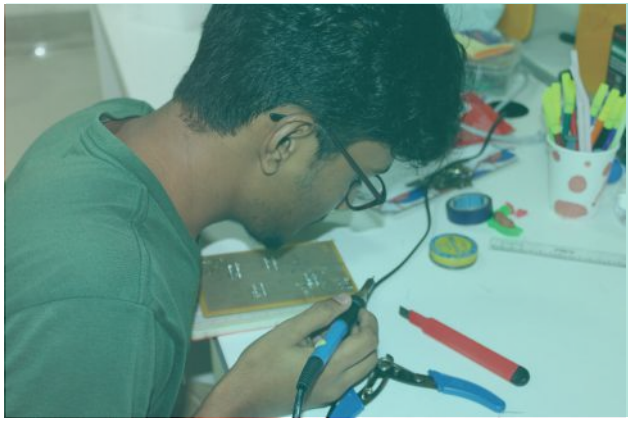
IIITDM has also signed memorandums of understanding (MoUs) with the following institutions:

University of Genoa, Italy
University of Catania, Italy
Nagaoka University of Technology, Japan
HITACHI, Japan (student exchange program)

It also boasts of hosting the iconic 'International conference on design and manufacturing' (ICON-DM), which is a premier forum for the exchange of ideas and knowledge related to Design and Manufacturing that spans the disciplines of Computer Science, Electronics and Mechanical Engineering. With all these efforts, this institution has no doubt, created a unique niche for itself in the field of education.

MaDeIT

MaDeIT is a Section 8 company catalyzed and supported by a grant from the NSTEDB division of the Department of Science and Technology, Govt of India. It is one of the several incubators that provide impetus to government initiatives like ‘Make in India’ and ‘Startup India’. MaDeIT supports new product development and new venture creation in manufacturing and healthcare sectors. In line with IIITDM's agenda, MaDeIT encourages a design-oriented approach to development of cyber-physical solutions and smart products. MaDeIT provides opportunities for students of IIITDM to gain a first hand experience of new product development and venture creation. Students can either work as interns with incubatee companies or participate in events such as Startup Sandbox to experience the process of translating their ideas into reality. MaDeIT at present has eight incubatee companies at different stages of product development and more than 40 students (2nd, 3rd, 4th years) have been involved with MaDeIT.



MaDeIT
Believe. Design. Leap

www.iiitdm.ac.in/madeit

Design Innovation Centre

This centre, set up on July 01, 2017 , was made to inculcate, facilitate and spread the culture of innovation among the students, faculty, aspirants and relevant stake holders through innovative engineering and industrial design oriented novel courses, conduction of special training workshops, internships on product design, seminars by design experts , organizing design competitions, industrial visits and outreach activities.

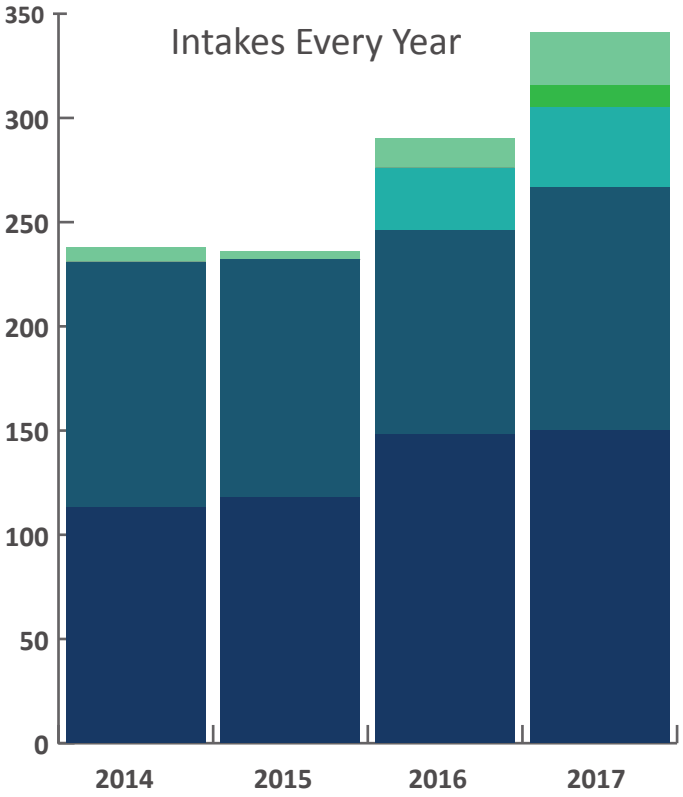
Currently many products like Solar Stirling Engine for water pumping, Online Braille reader, Smart locking system, Drone for agriculture, etc. are under development at DIC.

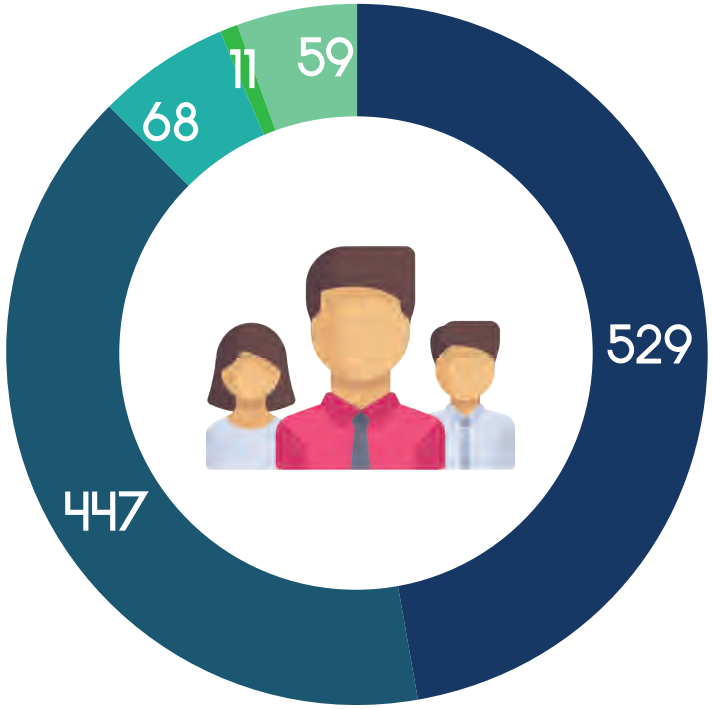
Teaching Learning Centre

The word engineering has its roots in the Latin term for 'to create'. Engineering education is fundamentally practice-oriented, but in resource-poor academic institutions access to hands-on laboratory instruction is constrained by the high cost of equipment and instruments. Many teachers have limited training with state-of-the-art equipment, and thus resort to purchase and use of commercial black-box type kits which provide students only limited learning outcomes.

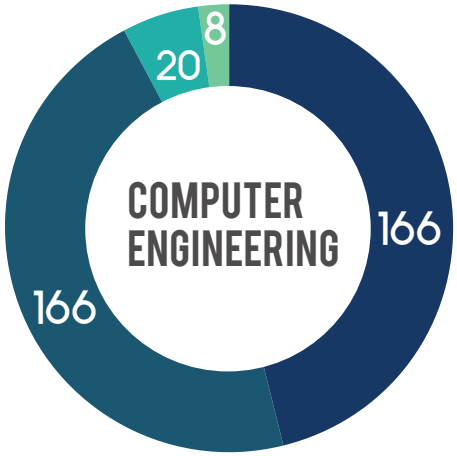
The Teaching Learning Centre (TLC) for Design and Manufacturing Education at IIITDM – Kancheepuram is funded by the Ministry of Human Resource Development (MHRD) under the Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT) scheme. The TLC aims to design and develop e-learning materials and common Do-It-Yourself (DIY) and Build-Your-Own (BYO) low-cost laboratory instruction modules for adoption and use in engineering universities, colleges and polytechnics. The modules are mainly built using inexpensive commercial off-the-shelf (COTS) materials and components, open source hardware, and free open source software, making them extremely affordable. The knowledge and experience gained can facilitate innovative projects by students and teachers.

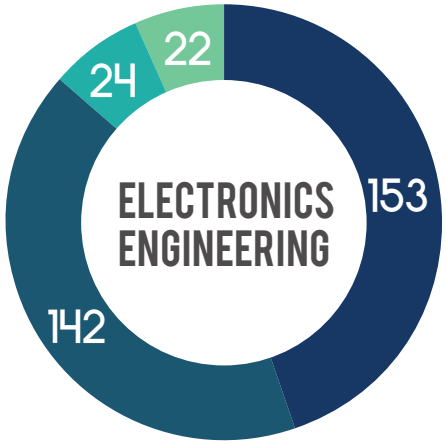
Demographics

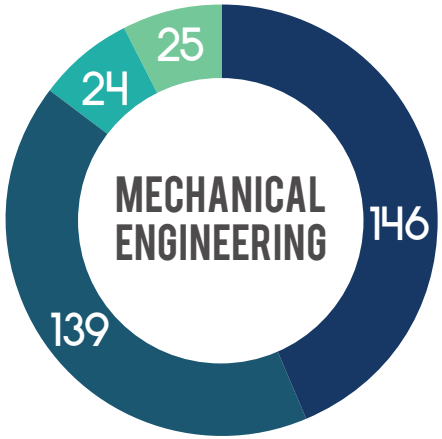


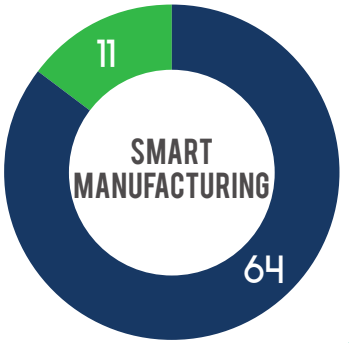


PhD
MTech
MDes
Dual Degree
BTech









Clubs

Ingenium
A fiefdom of mechanical engineers to deploy one's quintessential hands-on engineering skills to build or reverse engineer machines.

The Zerone club
Walking towards tomorrow with the ability to create allows one to conquer. Providing the foundation to build those codes and introduce people to new things, helping them discover their interests is what zerone means to do. Fun comes along when everyone gets every byte of their bits.

The Illiterati club
Thoughts without actions don't speak for themselves. A platform to express nerves, suppress averse and become diverse. Interactive sessions with jams and just a minute along with creative writing challenges and many more help every member become a global citizen.

E.P.I.C
This allows the students to gain an entrepreneurial perspective on applying the knowledge they have into creating feasible products/services. The coordinators simulate various business scenarios so as to expose the students to various enterprise practices as well as understand the happenings of the business world and how they can use it to their advantage.

Dance club
Expressing culture through fluidic movements is a great spectacle to the mind and soul. Practicing and learning various dance, help students have fun and learn this form of

Quiz
The place to put one's knowledge of trivia to test among peers and where one can win regardless of the result.

Industrial Design Corner IDC
A rostrum to emulate the designer mindset to diagnose the problem itself, conceptualize and design potent solutions.

Electronics Club
The club organises interesting sessions on circuit synthesis, Arduino programming and electronics software. The club encourages student projects and helps them source ideas and components as well.

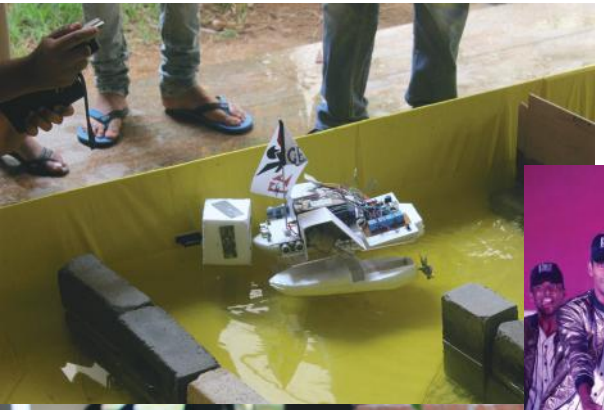
Robotics
A club for both eager beginners as well as hard-core enthusiasts where students are exposed to the various electronic and mechanical components and their interactions with each other. These learning sessions are supplemented with some rigorous hands-on robot building competitions based on pre-set problem statements that give students the experience on creating robotics-based solutions for everyday problems.

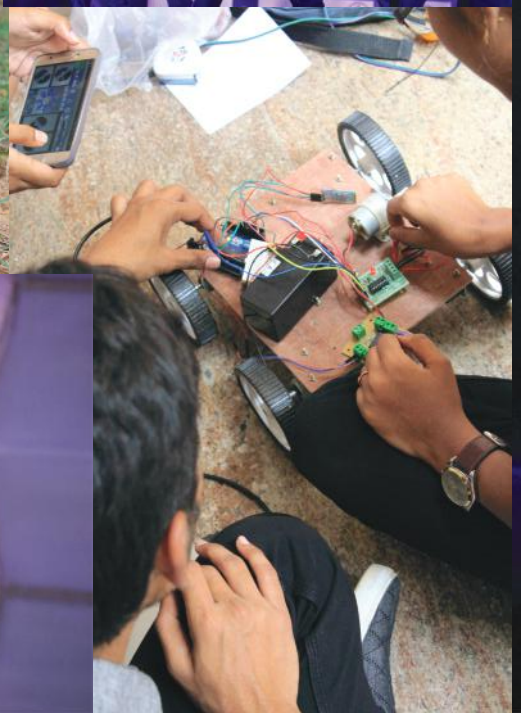
Language
Students systematically learn global languages such as German, French, and Spanish etc. from experienced and fluent speakers through regular sessions as well as light-hearted activities informing them of their culture. This affords them new opportunities to traverse and understand different countries as well as being able to express their ideas in multiple languages.

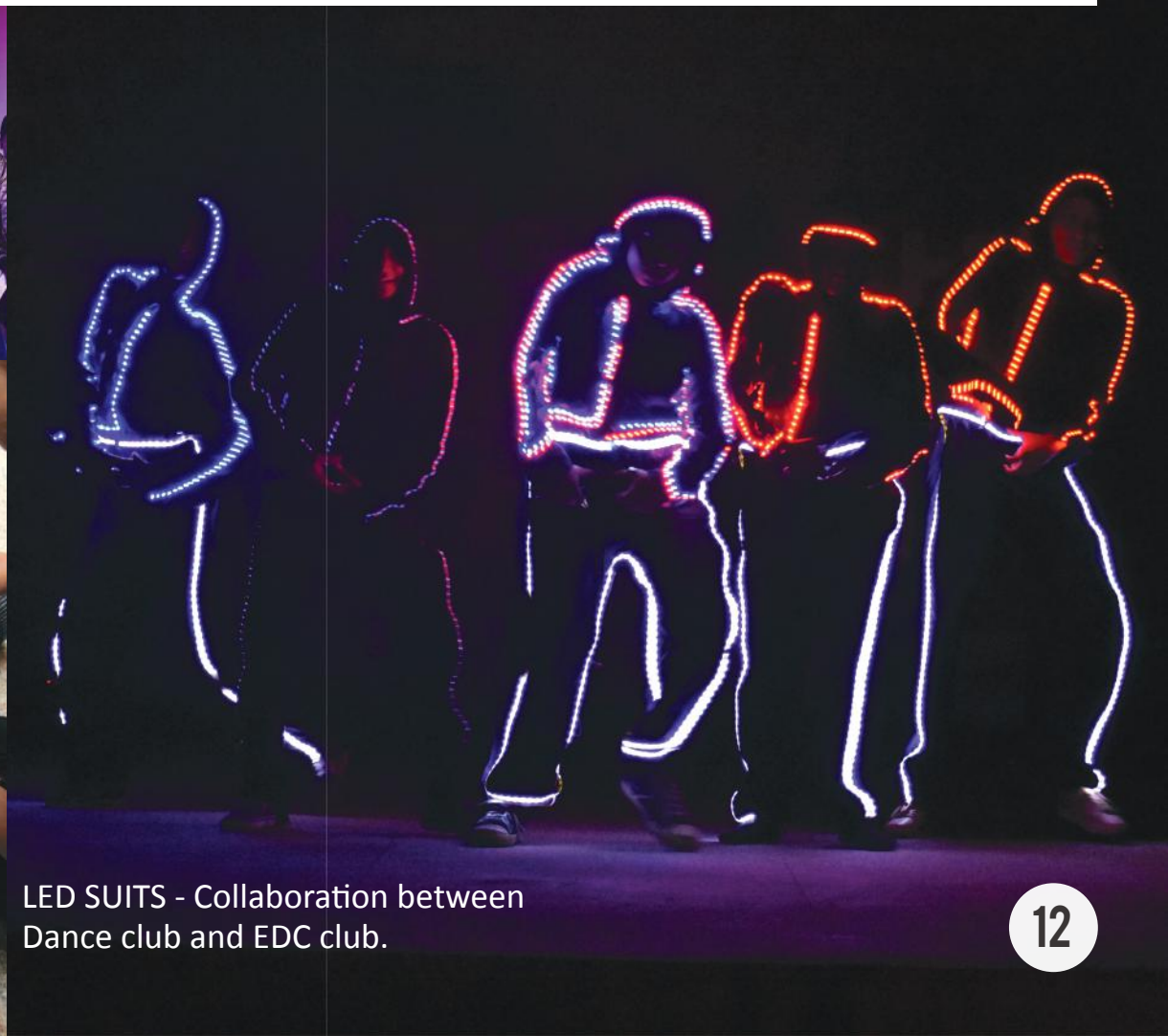
Samgatha

Samgatha is the annual inter-college techno-cultural fest of IIITDM, Kancheepuram. It derives its name from the Sanskrit word "samgatha" (सऽगथा) which means "confluence". It is a three day bonanza with a marvellous blend of fun, frolic and dedication.The event comprises of around 40+ events and is held annually in the month of March.

Hundreds of students from in and around Tamilnadu pour in to showcase their extra-curricular competence and managerial finesse. The festival has bloomed into an enormous stage for prolific speakers, amazing dancers, actors and innovators to boost their professional and organisational skills.







LED SUITS - Collaboration between
Dance club and EDC club.

Past Recruiters

Inautix
Alation
Startsmarts Lab
Trimble
Buddihealth
Honeywell
Tejas Networks
Saint Gobain
Coviam
Zoho
IVTL
Vassar Labs
Interface
Entrayn
Evive Software
TII (Murugappa Group)
Lucid
Vignan University
Excel Soft
Drive Analytics
L & T Tech Services
Orzota
Wheels India
Brakes India - Padi
Innominds
TCS
SVP Lasers
Kaleidozone
Tafe
Sundaram Fastners

Placement Procedure

Placement Cell (nodal point for placements at IIITDM Kancheepuram), assisted by student representatives, sends invitation to companies along with relevant information and documents.

A company can also show interest in recruiting IIITDM Kancheepuram students by contacting Placement Cell, IIITDM Kancheepuram by writing to placement@iiitdm.ac.in, stating intent to visit IIITDM Kancheepuram campus for recruitment. ERF can also be downloaded from our Training & Placement website.

After receiving filled in ERF and relevant information from a company T&P Cell will reply within 2-3 working days through email. The dates for campus interviews are allotted on the basis of information provided in ERF. It is expected that correct and complete information is provided by companies in ERF.

Suitable date for the Pre-Placement Talk (PPT) is decided by the discussions between the companies and the T&P Cell. After confirmation from the companies, students are notified of the PPT date. However, PPT and recruitment process can also go together.

Interested students will register for a particular company online through an internal website or by hard copies. After the dead line, the information will be forwarded to the company.

Companies are required to send the list of short listed students by email to the T&P Cell prior to the campus visit for final interviews.

The companies visit the campus for placements on the allotted dates and conduct Group Discussions/Aptitude test/Technical test/Personal Interviews etc., as part of their preferred selection procedure.

Alumni

Companies

Abi Showatech (I) Limited
Adnes Equifax/Nettpositive
Apple Inc.
Ashok Leyland
Bally Technologies
BEML Limited
Cognizant Technology Solutions
COMSOL Inc.
Core Design
Fobtech
Cummins Inc.
GE Capital
HCL Technologies
Infosys
Intellect Design
IVTL
Larsen & Toubro
Mu-Sigma Pvt Ltd
NEC India Pvt. Ltd.
Pricol Ltd.
Saint Gobain
Safran
Srushty Global solutions
Systeminsights
TCS
Techlinksolutions
Thorogood Associates
Trimble
Triad
United Health Group AVL Powertrain UK Ltd
Verizon Wireless
Vignan university
Sundram fasteners
SVP Laser Technologies Pvt. Ltd.

Higher Education

- Arizona State University
- Columbia University
- Florida Institute of Technology
- Georgia Institute of technology
- Penn State University
- Purdue University
- Stanford University
- The Ohio State University
- University of Wisconsin–Madison
- IISC, IITs and IIMs

IIITDM in the news

ROSMA:
RoSMa (Robotics and Smart Manufacturing) 2018, is an international conference that talks about the leading developments in robotics, applications of smart materials in robotics and allied area, is being hosted by IIITDM Kancheepuram . This conference has a part of it an International Student Robot Competition, testing the contestants knowledge on the vast sphere of robotics . This year's conference has some honoured speakers from various foreign universities like University of Geneva and NTU Singapore and also premier Indian institutes like IITs.

India Today ranks IIITDM Kancheepuram as the 6th Promising Engineering Institution in India.

Student Achievements

At the Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, we strongly believe that the only limit to your achievements is the reach of your dreams and your willingness to work for them.Our fellow IIITians have always been big dreamers and their perseverance and hard work along with the guidance and support from their professors have helped them turn their dreams into reality. This time as well, our alumni have entered into some of the world's best universities for higher studies and are continuing the pursuit of their passions. Institutions like The University of Edinburgh in UK, TU Delft, Delft in Netherlands, The University of Colorado, University of Texas, Georgia Tech in the US and many of the prestigious IIMs and IITs have welcomed our students into their communities. A dream doesn't become reality through magic, but through sweat, determination, hard work and most importantly, love for what you are doing or learning to do.

- R. Sowbarnika, a third year CS student was invited to deliver a performance talk at TEDx event held at NIT Trichy.

- Mr. Aakash Sunil Kale and team win 4th prize at National Level Open Challenge Competition organized by MoD.

- Vamshi Gangadhar Chiluka secured AIR 62 in GATE 2018 CS paper.

- Mr. Md Sehzad Alli, a PG student wins best paper award in NHTFF18 held in NIT Warangal.

- Student teams from IIITDM Kancheepuram win competitions held at Caterpillar and TAFE.

- Dual Degree CS students Vignesh Sairaj, Vijayaraghavan and Sreeraj qualify for ACM ICPC Regionals contest.

- Aneesh D.H (UG First year) secured 4th rank in Code Gladiators coding contest conducted by TechGig.

- Ms Manogna Jambhapuram, a PG student wins best research paper award in CSS-2017 held at IISc.

- Teja Balu, a third year Dual Degree student, secured Second Prize in Design for Automotive Challenge and a 4th Place in International Autodesk Design for Space Challenge globally.

Placement Team

Campus Placements at IIITDM Kancheepuram are coordinated by a team of students working in tandem with the placement Office.

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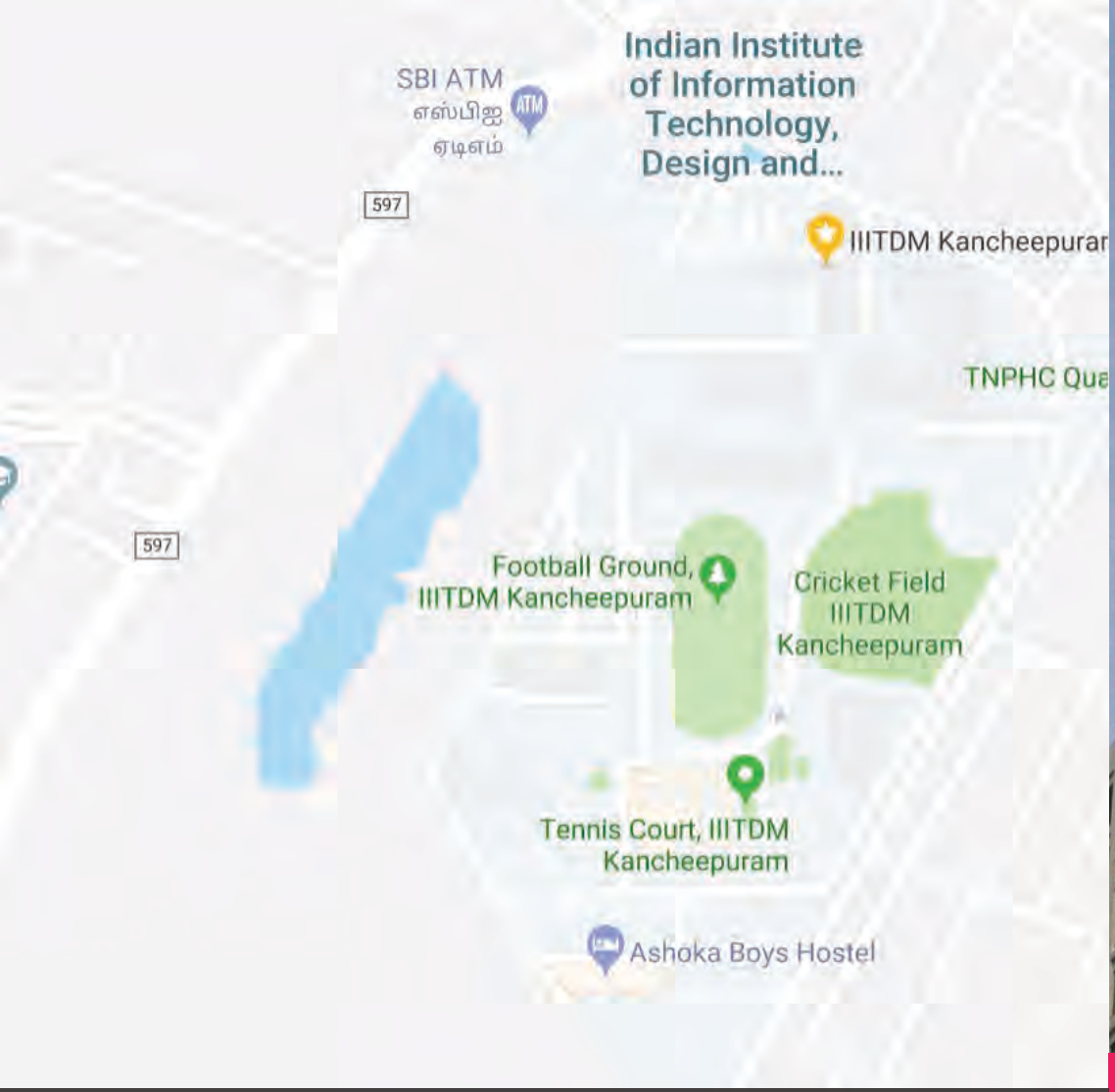

#Design is where science and art break even

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